

WHAT IS CLAIMED IS:

1. An inkjet head comprising:

a plurality of flow passages each composed of  
a nozzle to discharge ink and a pressure generating  
5 chamber communicating to the nozzle;

a common ink chamber which supplies ink to each of  
the flow passages; and

an actuator which expands/contracts a volume of  
the pressure generating chamber,

10 wherein the physical properties of the ink and the  
flow passage satisfy a relationship of  $0.2 \leq \gamma^2/\omega^2 \leq$   
1.0 ( $\gamma = R/2M$ ,  $\omega = \sqrt{K/M}$ , where M is inertia of the ink  
in the flow passage when the ink is charged in the flow  
passage, and R is a viscosity resistance of the ink in  
15 the flow passage).

2. An inkjet head according to claim 1,  
wherein a fluid resistor is intervened between the  
pressure chamber of the flow passage and the common ink  
chamber.

20 3. An inkjet recording apparatus comprising:

a plurality of flow passages each composed of  
a nozzle to discharge ink and a pressure generating  
chamber communicating to the nozzle;

a common ink chamber which supplies ink to each of  
25 the flow passages;

an actuator which expands/contracts a volume of  
the pressure generating chamber; and

a drive signal generating portion which outputs a drive signal for continuously discharging a plurality of ink drops from the nozzle to the actuator,

wherein the physical properties of the ink and the  
5 flow passage satisfy a relationship of  $0.2 \leq \gamma^2/\omega^2 \leq 1.0$  ( $\gamma = R/2M$ ,  $\omega = \sqrt{K/M}$ , where M is inertia of the ink in the flow passage when the ink is charged in the flow passage, and R is a viscosity resistance of the ink in the flow passage).

10 4. An inkjet recording apparatus comprising:  
a plurality of flow passages each composed of a nozzle to discharge ink and a pressure generating chamber communicating to the nozzle;

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15 ~~a common ink chamber which supplies ink to each of~~  
the flow passages;

a fluid resistor provided between the pressure generating chamber of the flow passage and the common ink chamber;

20 an actuator which expands/contracts a volume of the pressure generating chamber; and

a drive signal generating portion which outputs a drive signal for continuously discharging a plurality of ink drops from the nozzle to the actuator,

25 wherein the physical properties of the ink and the flow passage satisfy a relationship of  $0.2 \leq \gamma^2/\omega^2 \leq 1.0$  ( $\gamma = R/2M$ ,  $\omega = \sqrt{K/M}$ , where M is inertia of the ink in the flow passage when the ink is charged in the flow

passage, and  $R$  is a viscosity resistance of the ink in the flow passage).

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